

# 2012-2013

## Water Use Efficiency & Water Quality Marketing Report





# PROGRAM OVERVIEW

This 2012-2013 marketing and project report highlights the city's water-use efficiency program, ocean and bay water quality protection program, and heightened efforts for energy conservation. These complementary programs work to tighten the city's core efficiency, a key factor affecting the quality of life in Newport Beach.



## Water-Use Efficiency

According to government surveys, 36 states are anticipating water shortages in 2013. For good reason, water-use efficiency is a hot topic. State regulations now require a 20% reduction in water use by 2020 as compared to the base line per capita water consumption from 253.5

gallons of daily use.

A frequently asked question by City residents is “are we going to be in a drought?” Good question. Water content in the Sierra snowpack as of May 1 was only 40 percent of normal levels and runoff this year is expected to be less than normal. On the other hand, the past two winters have had lots of rainfall. As of January 2012, average water held in state reservoirs was at 95% of capacity. Water from these reservoirs makes up 32% of Newport Beach's supply.

On another positive note, the city and residents have made good strides in reducing water use with an 11% decrease since 2008. Unfortunately, a good portion of this reduced water demand is associated with the economic slowdown that began in 2008. When tourism slows down, so does water use. Water use is likely to increase as the economy recovers. This poses a challenge in forecasting City water needs and tailoring a community outreach program to encourage continuing wise use of water.

The unpredictability and variability of California weather highlights the need for the city to be prepared for the possibility of a dry 2013. It continues to be necessary for the city and residents to use water efficiently especially in landscaped areas where the majority of water is used in the city. The city is making a concerted effort to use water more sparingly in parks and landscaped medians.



been a dramatic improvement bay and ocean water quality. Heal the Bay now gives an “A” rating to all our beaches.

The City is recognized for its proactive and innovative approaches to

environmental education, community outreach, and enforcement, as well as implementation of creative and effective “best management practices” (BMPs) for reducing irrigation/wash-down runoff and implementing water quality protection measures. Staff is gratified that community associations and the business community have cooperated with us to move our program forward.

## **Ocean and Bay Water Quality Protection**

The City’s environmental program is one of the most proactive and effective programs in Orange County. The Public Works Department – Environmental Section conducts a robust inspection program of construction, commercial and industrial sites and boasts the highest percentage per capita of inspections conducted in the county. Working in partnership with regional, county and city agencies, there has

## **Energy Conservation**

The city is beginning to make important strides in developing and implementing energy efficiency projects. Some examples include the Dolphin and Tamura water wells and the 16<sup>th</sup>



street pump station, collectively yielding a savings of \$10,000 per month. The next potential project is the installation of micro-turbines in the City's oil fields to convert natural gas produced from the wells into electricity for operating the oil fields.

Staff actively seeks funding for programmatic support for facility and mechanical retrofits and forward-based energy planning.

## Environmental Projects

The City has a successful history of obtaining grant assistance for environmental protection and restoration projects. Over the past 10 years, the City has been awarded ten competitive state-wide grants totaling over \$6 million. These grants have provided the cornerstone for developing a broad and comprehensive environmental program to protect and restore water quality and marine life in the Bay and along Newport Coast. This funding has also allowed the City to develop innovative protection and restoration projects to effectively protect sensitive habitat, private property and City infrastructure.



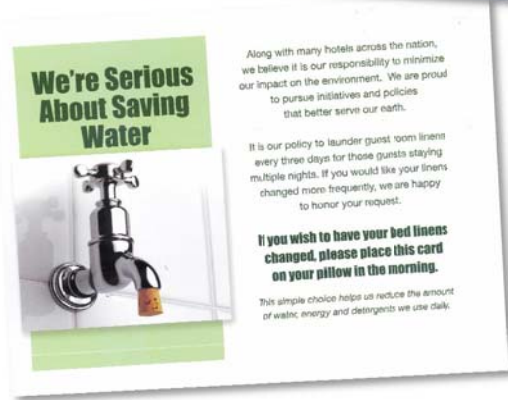
# CITY PROGRAMS

## A. PUBLIC OUTREACH

Completed Components and Ongoing Outreach

**Objective:** Support outreach messaging and public awareness through advertising in multiple media and direct mail.

Example of municipal bill inserts and hotel conservation messaging (front and back)



## City Implementation:

- Two websites, WaterSmartNewport.org and CleanWaterNewport.com, are maintained by staff providing meaningful information on water-use efficiency and protecting water quality.
- The City has a Twitter channel with **400+ followers**

follow us on **twitter.com/h2oconserve**

- Bi-monthly water bill inserts with monthly seasonal messages, (electronic bill pay customers receive a copy of the inserts with their municipal statements)
- Municipal billing statements that include water related messaging.
- Promotions featuring information on water saving rebates for industrial and commercial sites, community associations and business parks.



## B. EDUCATION AND PARTNERSHIPS

Interest Group and Public Events

**Objective:** Promote public awareness on water-related issues and utilize relationships with nonprofits and other interest groups through events and support.

## City Implementation:

- Continue partnerships with OC Coastkeeper, Surfrider, Newport Bay Conservancy and Friends of Newport Coast to promote water-related projects and programs.
- Work with community associations promote local conservation and water quality efforts
- Participate in environmental related events alongside interest groups and nonprofits



- Staff presents: Newport-Mesa schools, resident associations, garden clubs, interest groups e.g. Kiwanis and Rotary
- Water quality and conservation resident survey **(over 1500 respondents)**
- Staff training of all field personnel on water quality and conservation related issues



- Non-profit partnerships help to promote water conservation and water quality awareness



2012 Children's Water Festival

### C. MEDIA OUTREACH

*Public Service Announcements, NBTV, and Magazine Print Articles*

Objective: Connect with a broad age demographic with water quality and conservation messages.

#### City Implementation:

- 2012: Created a water quality and conservation PSA for pre-movie display in all Newport Beach movie theatres. PSA messages will also be displayed on the large plasma screens in the movie lobbies.
- 2012/13: PSAs are featured on NBTV, City website, messaging and "looped" television
- FY2013: Look for a new batch of water efficiency and water quality Waterwise episodes e.g. model irrigation and runoff reduction; practical steps to reduce our water footprint.

### D. PUBLIC RELATIONS, PROMOTIONS AND EVENTS

*Completed Components and Ongoing Outreach*

Objective: Provide an avenue for more detailed information and education through print, television and multi-media channels about water quality and conservation efforts, how Newport Beach is involved and how residents can contribute.



#### City Implementation:

- Articles featured in
  - **Newport Beach Independent**
  - **City Manager's Newsletters.**
  - **Daily Pilot and Orange County Register**

- Staff presence at least once a month at various events and community outreach programs, including: **Earth Day, Coastal Clean Up Day, Children’s Water Festival and Dana Point Ocean Institute** (school outreach). Our displays include banners with water conservation and water quality messages distribution of water-saving tips, special water-conserving promotional items, irrigation sprinkler keys, shower timers and miscellaneous water quality information.
- **Wyland Mayor’s Challenge for Water Conservation**—A friendly challenge between mayors and cities across the nation competing against like populations. Newport Beach came in the top 5 in the Western United States. Under this challenge, Newport Beach residents pledged to save:

Water: **56,169,416.00 gallons**  
 Money (water): **\$137,881.00**  
 Fertilizer not in waste stream: **204,195 lbs.**  
 Water Bottles reduced: **12,825**  
 Co<sup>2</sup> Emissions: **1,796,601 lbs.**



- **Dana Point Ocean Institute**—Presentations made to K-8<sup>th</sup> grade school children on watershed and water conservation issues.
- **OC “Be a Water Hero” Pledge Cards**—The City participates in a water conservation pledge program created by MWDOC to coordinate conservation messaging for Orange County, targets every elementary school within Orange County. Students may sign up to pledge to



save water and receive a free gift for being a “Water Hero”.

- **School Outreach Program**— Each year, Newport Beach Elementary School students and teachers learn about water from Newport Beach and MWDOC’s school program. Staff has seen an increase in student interest in pursuing careers in water-related fields. 675 Newport Beach elementary school students will participate in school water education in FY 12-13:

| School                     | Students   |
|----------------------------|------------|
| Eastbluff Elementary       | 314        |
| Newport Heights Elementary | 361        |
| <b>Total</b>               | <b>675</b> |



**DISCOVERY**  
SCIENCE CENTER

- **March 2012: WaterMiser Workshop**—The annual event was held on March 8, 2012. Guest speakers this year were Pamela Berstler (G3) and Paul Herzog (Surfrider Foundation – Ocean Friendly Gardens). The presentation focused on sustainable landscaping and irrigation practices. Vendors displayed irrigation controllers, nozzles and a host of drought tolerant plants. Guests participated in a free raffle of gifts donated by the vendors. Participants included City of Newport Beach (host), Rogers Gardens, Hunter Industries, Valley Soil, Inside the Outdoors and various environmental companies.



- Gardeners Workshop**—This training has a target audience of professional gardeners that service resident and commercial locations throughout Newport Beach. Topics are on sustainable landscaping, reduction of green waste, pest management and certification classes on weather based irrigation controllers.



- Heal the Bay's 2012 Annual Beach Report Card Honor Roll**—The Beach Report Card is based on the routine monitoring of beaches conducted by local health agencies and dischargers. Water samples are analyzed for bacteria that indicate pollution from numerous sources, including fecal waste. The better the grade a beach receives, the lower the risk of illness to ocean users.

### Honor Roll

- Projection of 52nd/53rd Street
- Balboa Beach, The Wedge
- Newport Bay, Onyx Avenue Beach
- Newport Bay, N Street Beach
- Newport Bay, Rocky Point Beach

### Grading Detail

|                                | Summer Dry (April - Oct) | Winter Dry (Nov- Mar) | Wet Weather Year-Round |
|--------------------------------|--------------------------|-----------------------|------------------------|
| Projection of Orange Street    | A                        | A                     | B                      |
| Projection of 52nd/53rd Street | A+                       | A                     | A                      |

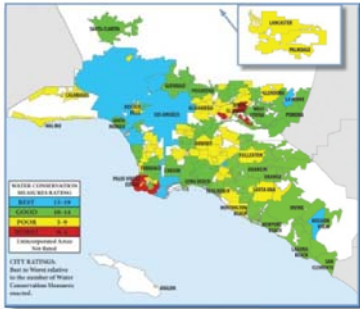
|                                |    |    |    |
|--------------------------------|----|----|----|
| Projection of 38th Street      | A  | A+ | A  |
| Projection of 15th/16th Street | A  | A  | A  |
| Balboa Beach Pier              | A  | A  | A  |
| The Wedge                      | A+ | A  | A  |
| Newport Dunes, North           | A  | A+ | F  |
| Newport Dunes, East            | A  | C  | F  |
| Newport Dunes, Middle          | A  | B  | F  |
| Newport Dunes, West            | A  | A  | F  |
| Bayshore Beach                 | A+ | A+ | F  |
| Via Genoa Beach                | A+ | A+ | C  |
| Lido Yacht Club Beach          | A  | A  | C  |
| Garnet Avenue Beach            | A  | A  | C  |
| Sapphire Avenue Beach          | A  | A+ | B  |
| Abalone Avenue Beach           | B  | A+ | B  |
| Park Avenue Beach              | A  | A+ | A  |
| Onyx Avenue Beach              | A+ | A+ | A  |
| Ruby Avenue Beach              | A+ | A  | B  |
| Grand Canal                    | A  | A+ | B  |
| 43rd Street Beach              | A  | A  | F  |
| 38th Street Beach              | A  | A+ | D  |
| 19th Street Beach              | A  | A+ | A  |
| 15th Street Beach              | A  | A+ | A  |
| 10th Street Beach              | A  | A+ | C  |
| Alvarado/Bay Isle Beach        | A  | A+ | B  |
| N Street Beach                 | A+ | A+ | A  |
| Harbor Patrol Beach            | A  | A  | B  |
| Rocky Point Beach              | A+ | A+ | A  |
| Corona Del Mar                 | A  | A  | A  |
| Little Corona Beach            | A  | A  | A+ |



|                       |    |    |    |
|-----------------------|----|----|----|
| Pelican Point         | A  | A+ | A+ |
| Crystal Cove (weekly) | A+ | A+ |    |
| Muddy Creek           | A+ | A+ | A+ |

• **Sierra Club Water Conservation Measures—**

The Sierra Club Angeles Chapter has released a Water Conservation Measures Scorecard that rates the cities in Los Angeles and Orange Counties by the number of mandatory water conservation measures enacted. Cities are ranked for measures in their ordinances that address appropriate water use, avoid water waste, improve building standards, and prescribe water-efficient business practices.



Newport Beach was ranked “Good” in existing water conservation measures enacted throughout the city.

**E. COMPLETED COMPONENTS AND ONGOING PARTICIPATION AND OUTREACH**

Objective: Coordinate and collaborate with MWD, MWDOC & SARWQCB in community awareness and outreach campaigns to ensure a clear, consistent message to our regional community and capitalize on economies of scale and audience message reinforcement.

City Implementation:

- Newport Beach participates in the “Choice Program”, in which cities and water districts can choose from various water use efficiency programs that are offered by MWDOC maximizing budgets and focusing in on programs that are important to our service area.

- **Rebate and audit programs**—The city participates in washing machine, stream nozzle, weather based irrigation controllers, turf removal rebates and commercial/industrial water efficiency programs.
- **Coastal/Bay Water Quality Citizens Advisory Committee**— chaired by Mayor Gardner, pioneering water quality and conservation projects city-wide.
- Staff is active in county and city committees aiding in a comprehensive and balanced approach to programs and projects.
- **The Office of Marine Protection and Education**—Staff takes the lead in numerous outreach events and programs in Orange County reaching over 10,000 people annually. Thus far in 2012, staff members have presented a “Drains to Ocean” program at special events including the **Children’s Water Education Festival** in Yorba Linda, **Earth Day Celebration** at the Peter and Mary Muth Interpretive Center and **Estuary Awareness Day** at the Back Bay Science Center. The “Drains to Ocean” program emphasizes the importance of keeping trash, pesticides, fertilizers and oil off our streets and out of our yards so they do not reach the ocean. Ongoing outreach programs include a marine interpretive table at the Little Corona tide pools in the Crystal Cove State Marine Conservation Area, tide pool exploration field trips for school groups, and Community Day at the Back Bay Science Center every Sunday. For all aspects of the program, students and the public are encouraged to be proactive to help protect water resources and the environment around them.



- **California Friendly Garden Contest—**

The city partners with Roger's Gardens' California Friendly® Garden Contest promoting a “smart” and sustainable landscape for the homeowner. It is the most visible feature of the California Friendly home. The contest judge’s outdoor spaces designed in harmony with the surrounding environment using beautiful and less-



than-thirsty plants, state-of-the-art irrigation controllers and precision sprinkler heads.

## F. ENHANCED WATER USE EFFICIENCY PROGRAMS AND FINANCIAL INCENTIVES

**Objective:** Expand outreach efforts that enhance existing rebates and programs beyond the traditional approach. Staff is developing tools, sharing knowledge and resources that can assist the community to conserve.



### City Implementation:

- **WaterSmart Software Pilot Program—**This online program that the City kicked off this year, encourages 2000+ residents in the Big Canyon watershed to use water more efficiently at their the homes. We are offering a customized monthly home audit report including comparative “like property” water use averages. Strategic water saving tips and

specific rebates are offered to help make practical changes in water use specific to the needs of the property owner. This type of communication grabs the attention of the homeowner to act in using water more efficiently.

- **Wyland’s National Mayor’s Challenge for Water Conservation—**This competition challenged cities around the nation to engage residents to make a pledge to conserve water and reduce their environmental footprint. The grand prize was a Toyota Prius. The challenge was sectioned of into regions and by population. Below are the results for the Western US with our population range from 30,001 – 100,000

1. Manhattan Beach, CA
2. Redmond, OR
3. Bremerton, WA
4. Aliso Viejo, CA
5. **Newport Beach, CA**
6. Lacey, WA
7. Montrose, CO
8. Redondo Beach, CA
9. Palo Alto, CA
10. Kaneohe, HI



*Newport Beach residents pledged to reduce: 562,000 gallons of water and 10300 pounds of fertilizer*

- **Commercial Rotating Nozzle Rebate—**This rebate program offers our customers a \$4.50-\$8 rebate for the purchase of each rotating nozzle for pop-up spray heads. Rotating nozzles apply water more slowly and uniformly than conventional sprays and has an estimated water savings of 20 percent.
- **Weather Based Irrigation Controller (WBIC)—**Increased program funding to offer rebates to our customers to incentivize the installation of WBICs. These controllers fully automate the watering schedule



based upon weather, slope, soil type and the actual water needs of plants. Newport Beach is a participant in this MWD/MWDOC rebate program rebating up to \$435 per controller.

## CITY PROJECTS

### G. WATER EFFICIENCY, WATER QUALITY & ENERGY

Objective: Ensure that the City of Newport Beach is a visible advocate for water use efficiency and water quality stewardship.

#### City Implementation:

- **City Parks and Medians**—Municipal Operations Department has reduced its water use in a significant way over the past three years by completing water budgets for all city landscaped properties and street medians including new irrigation enhancements at Castaways Park. Irrigation scheduling is now connected to the city's computerized central weather based irrigation system. **Other notable efforts** include GIS mapping capabilities to include all irrigation lines, backflow devices, meters and each valve on city sites.
- **Energy + Water Nexus**—The water/energy connection is increasingly becoming vital as both water and electricity costs rise.

#### *City Actions:*

- Preparing a City Energy Action Plan (EAP) to ID our near/long term goals and an implementation plan.

- Energy audit at the Dolphin/Tamura Water wells – Council approved budget on 6/12/12 for VFD design & construction. Anticipated energy savings upon project completion is \$10k/month.
- Energy audit at 16th Street Booster Pump Station –Investigating design options. Potential energy savings upon potential improvement implementation is \$5-10k/month.
- Completed Central Library energy audit. This will complement the Central Library HVAC system upgrade.
- Continuing incentives from the LED streetlight improvement projects.
- Working with IT to launch a plug-load sensor pilot program amongst City staff.
- Working with Susan G. Komen Foundation for EE ME&O (Marketing, Education, and Outreach) at Race for the Cure 2012.
- Currently at “Valued Partner” status in the partnership. Aiming to reach “Silver” level within the next year.
- Participation in research and pilot program for water production/energy efficiency nexus study.
- Installation of micro-turbines in the City's oil fields to convert natural gas produced from the wells into electricity for operating the oil fields.

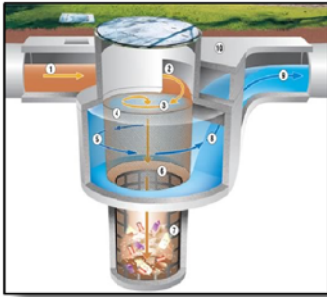


- **Governors Bill—20 x 2020**

In November 2009, the Governor signed into law SB7x-7 which requires each urban retail water supplier to develop urban water use targets to help meet the 20% goal by 2020 and an interim 15% goal by 2015. Under the law, water use is measured on a per capita basis, calculated as gallons per capita per day (GPCD). The City's 2015 interim water use target

is 228.1 GPCD and the 2020 final water use target is 202.8 GPCD. (See 2010 UWMP for details)

- **OCTA Measure M Funding**—This grant program provided by OCTA is designed to help improve



transportation-generated water quality pollution. To date the city has been awarded **\$200,000** for the installation of two CDS units on Old Newport Boulevard, with an additional five separate locations awaiting funding approval. The second round of funding (Tier 2) anticipates the

submittal of up to three more projects.

- **ASBS Protection Program** (Award \$2,500,000)  
Staff was awarded a Prop 84 funding grant by the State. This grant provides the primary funding for continued efforts to improve and monitor the health of the Newport Coast watershed with its receiving waters designated as an Area of Special Biological Significance (ASBS). The project also focuses on reducing landscape irrigation runoff and pollutant loading (fertilizers, pesticides, and other landscape-related contaminants) from residential accounts and large landscapes, which drain to the ASBS. Existing irrigation systems will be replaced with adaptive controllers that adjust to weather conditions. Also, structural BMP's are installed to control erosion, settling basins and slope stabilization in Buck Gully.
- **Restoration Project - Lower Buck Gully:**  
This project addresses dry weather pollutant loads and stabilizes the canyon streambed with a series of drop



structures. The areas behind the drop structures create several acres of wetland. This area is engineered to treat by settling nuisance water containing sediment and metals. This also serves to reduce nutrient and bacterial load from the receiving waters.



- **Smart Irrigation Controller Installation**  
*Newport Beach/ Coast:* Over \$1 million has been budgeted from Prop 84 funding. This project provides for the installation of Weather Based Irrigation Controllers (WBIC) to residents within the ASBS watershed. To date over 482 WBICs have been installed, reducing runoff into the ocean.
- **Selenium Reduction and Low Impact**

**Development Program: Big Canyon Creek:** This program will address a spectrum of problems that have been created by rising groundwater discharging into creeks, roadways and below grade structures. The rising groundwater is believed to be primarily caused by over-irrigation. Along with runoff reduction, the short term goal is to divert selenium “hot spots” at three subdrain locations to the sanitary sewer and monitor changes in selenium concentration in the watershed.

These results will be used to refine future projects which include elimination of stagnant water areas, additional diversions and possibly treatment. Successful reduction of selenium concentrations will allow for restoration efforts to continue in the restoration area west of Jamboree Road.



- **Huntington Beach Seawater Desalination Project**—On January 20, 2010, the City signed a non-binding LOI for 5 MGD (6,000 AFY) of Huntington Beach Seawater Desalination Project supplies. The



Project has received specific approvals from the Huntington Beach City Council, including the Coastal Development Permit, Tentative Parcel Map, Subsequent Environmental Impact Report and Conditional Use Permit, which

collectively provide for the long-term operation of the desalination facility. It is anticipated to begin producing drinking water for Orange County as soon as 2014.

- **Bight '08 Coastal Wetlands and Estuaries**—Through the Southern California Coastal Water Research Project (SCCWRP) Newport Beach is actively participating in the Bight '08' project. The objectives of this study are to characterize the extent and magnitude of the impacts that runoff and human interaction have upon estuaries along the Southern California Bight (SCB), as well as the extent of sediment contamination in these estuaries.

## **CLOSING STATEMENT**

### ***–Water Use Efficiency***

This year, water use in the city has continued to drop: City water consumption in 2009 of over

16,000 acre-feet has declined by over 2,000 acre-feet in 2011, a decline of 13 percent! Newport Beach is on track for meeting its interim target reduction of 15% by 2015 and overall water use by to 20% by 2020. This decrease in consumption will result in cost savings for water treatment and water distribution.

### ***–Water Quality***

City Council has made a continuing investment to improve bay and ocean water quality. Staff has successfully engaged residents to partner with us to change how we treat our water resources. The clear water in the harbor and the abundance of marine life are visible evidence of the progress that is being made. This is reinforced by positive data released in the Heal the Bay's annual beach report card.

*"Our residents and businesses have changed many of their practices because of their impact on water quality. They have supported the city funding staff positions for water quality education and enforcement as well as water quality projects."*

Newport Beach Mayor, Nancy Gardner – CDM Patch

*"I think it's the city's long term emphasis on water quality education, enforcement of our no-discharge requirements, improved built-in infrastructure like storm drain diversions and screens and better practices by everyone."* City Manager, Dave Kiff – CDM Patch

### **—Energy Efficiency**

Newport Beach has stepped up efforts to implement innovative and practical approaches to saving energy. One expression of this approach is investing in an Energy Action Plan (EAP). We are excited to see energy reductions realized in the upcoming fiscal year.

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